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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,575	07/20/2005	Sumio Iijima	2005_0065A	4026

513 7590 12/22/2009

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EXAMINER	
KELLY, ROBERT M	

ART UNIT	PAPER NUMBER
1633	

MAIL DATE	DELIVERY MODE
12/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,575	IIJIMA ET AL.	
	Examiner	Art Unit	
	ROBERT M. KELLY	1633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/15/09, and the requested claims and argument of 7/15/09 has been entered.

Claims 1-5 are cancelled.

Claims 7-18 are presently pending and considered.

Claim Status, Cancelled Claim(s)

In light of the cancellation of Claims 1-5, all rejections and/or objections to such claims are rendered moot, and thus, are withdrawn.

Note On Claim Interpretation to Help Applicant Draft Claims

Applicant appears to be arguing something different than the claims, given their broadest reasonable interpretation, claim.

For example, Claim 1, contrary to Applicant's argument, appears to reasonably be drawn to selectively lysing (in Applicant's words "vanishing") the SWNTs of 1.2 nm. While it appears further that the specification teaches that 620nm light will lyse all lengths of SWNTs, except those of 1.2 nm, in Example 1, the claims are rejected, and not the specification.

It is suggested that Applicant obtain help translating claim terminology for a better defined claim, and avoid the problems that appear to be happening due to translation problems. It should be noted, as the Examiner assumes in the case of the Japanese language, legal terminology is meant to be more exacting than that of normal useage of the language. Hence, while the specification may be poorly written, the claims are not so-allowed-to-be poorly written.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Applicant is advised that should any of Claims 8, 11, 14, or 17, be found allowable, Claims 9, 12, 15, or 18, respectively, will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Under one reasonable interpretation of any of Claims 9, 12, 15, or 18, any temperature may be utilized, and hence, it does not further limit the scope of the parent claim. (Note: this is further explained under the rejection for lack of clarity, below.)

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 lacks a conclusion commensurate with the preamble which provides such confusion as to leave the claims open to the interpretation that the specific diameter(s) are either the sole ones oxidized, or the specific diameter(s) are the sole diameter(s) which are present at the end of the method.

Claims 7, 10, 13, and 16, by not comprising a conclusion commensurate with that of the preamble, leaves the Artisan unsure as to what else may be required of the claim, if anything, and hence, the metes and bounds of the claims are not clear.

Claims 9, 12, 15, and 18 each recite “a temperature of 0[deg.]C or more and 500[deg.]C or less". The claim can be interpreted to containing a Markush group of two operable ranges, which essentially amount to choosing any temperature, or a single range of 0-500 deg. C. Such leads to confusion as to the metes and bounds of the claim, especially because if any temperature could be used, it would be Double-Patenting.

Claims 8, 9, 11, 12, 14, 15, 17, and 18 are rejected for depending from a claim(s) which is(are) rejected, and not clarifying the issues of indefinite nature provided by such claim(s).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 7 is drawn to a method for selecting (interpreted to encompass destruction of as well as retention of, in alternative interpretations) SWNTs of 1.2 nm in diameter, from a generic mixture of any sizes of SWNTs, comprising irradiating the mixture with light at 620nm, under a generic oxidative environment. Claims 8-9 depend from Claim 7, and do not alter the generic aspect.

The specification teaches selective destruction of any size SWNT by light irradiation (p. 2, paragraph 3), and in a specific embodiment to the irradiation of a specific mixture of specific sizes of SWNTs with 620 nm light to provide for SWNTs of 1.2 nm in diameter (EXAMPLE 1, pp. 6-7). Applicant utilizes the same to portions of the specification to provide support (Applicant's argument of 7/15/09, p. 4, paragraph 4).

However, this support is insufficient to evidence the use of 620 nm light in any mixture of SWNT sizes, to yield only 1.2 nm diameter SWNTs. Firstly, a single example is never enough to provide support for a generic embodiment, and this is emphasized by the fact that p. 2,

paragraph 3 fails to point to the use of 620 nm light. Secondly, Applicant has shown that 620 nm light works to vanish all except 1.2 nm SWNTs in a specific experiment, with specific temperature and time frames and pressures and air, and further, while absolute oxygen concentration and the kind of CO bond (which is ambiguous as to which bond is being referred to), it still does not show that any other size SWNT will be lysed but only that the ones in the Example, except 1.2 nm SWNTs, would be so-lysed (i.e., vanished). Lastly, as Example 1 definitively shows, SWNTs of 1.2 nm diameter are NOT destroyed.

Hence, there does not exist support in the original filing to provide support for the full scope which appears to be intended to be claimed by Applicant. Therefore, the support necessarily requires extraneous information to provide support, and is therefore necessarily obvioussness-type support which is not sufficient to demonstrate possession.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

One reasonable interpretation of Claims 7-9 is that the nanotubes of 1.2 nm diameter are destroyed by 620nm light under an oxidative environment.

Applicant's specification teaches such nanotubes are selectively retained (Example 1). Hence, this means that the claim is not enabled as it is inoperative.

Claims Free of the Art

Claims 10-18 are free of the Art. Specifically, there is no real information in the Art to demonstrate with a reasonable expectation of success that the various wavelengths will lyse the specific sizes of nanotubes. Moreover, there is no Art to anticipate the same. Applicant's advancement provides the Art with knowledge of specific wavelength-SWNT size relations for photolysis.

Claims 7-9 are free of the Art. Specifically, there is nothing in the Art to lead the Artisan reasonably expect that a single wavelength would remove a broad range of SWNT sizes, leaving only 1.2 nm diameter SWNTs. Moreover, there is no Art to anticipate the same. Applicant's advancement provides the Art with knowledge of such existence, and the specific wavelength and size SWNT.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT M. KELLY whose telephone number is (571)272-0729. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on (571) 272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert M Kelly/
Primary Examiner, Art Unit 1633